



NOAA and the National Deep Submergence Facility

DEep Submergence Science Committee Meeting NOAA 2006 Report

November 9, 2006
Seattle, WA

Image courtesy of the MTS'04 science team, IFE, URI/IAO

NOAA and the NDSF

NOAA, Navy, and NSF fund the NDSF through an MOA

Two NOAA programs use NDSF:



<http://www.oceanexplorer.noaa.gov>

<http://www.nurp.noaa.gov>



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NOAA and the NDSF

NURP Mission:

To support NOAA's mission through advanced undersea research, sampling, observation, and education.

For more info contact: Kimberly.Pugliese@noaa.gov

<http://www.nurp.noaa.gov>

OE Mission:

To support NOAA and national objectives by exploring our largely unknown ocean in all its dimensions for the purpose of discovery and the advancement of knowledge.

For more info contact: Reginald.Beach@noaa.gov

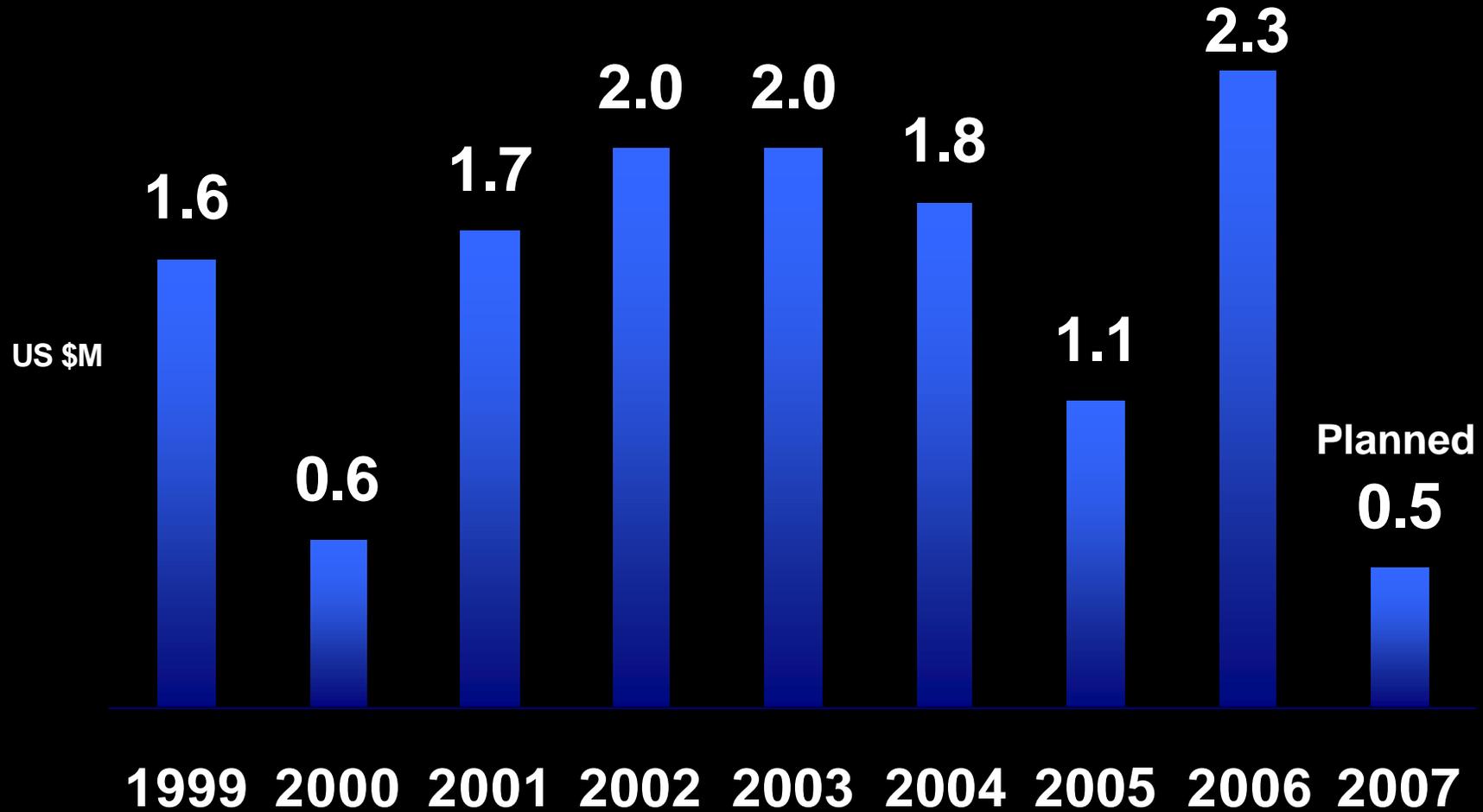
<http://www.oceanexplorer.noaa.gov>



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Past NOAA NDSF Funding Levels



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NDSF Support in FY2006

NOAA portion (20%) of Alvin overhaul & certification costs



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NDSF Use in FY2006

Project **Expedition to the Deep Slope**

PI Chuck Fisher

Asset (& Ship) Alvin (Atlantis)

Area Gulf of Mexico

Objectives Systematic exploration of hydrocarbon seep
Communities deeper than 1000m



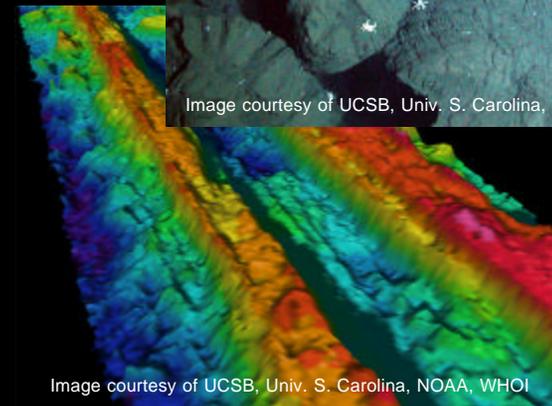
Project **GalAPAGoS Expedition**

PI Rachel M. Haymon

Asset (& Ship) DSL-120 and Medea (Thompson)

Area Galapagos

Objectives Explore a section of the Galapagos
Spreading Center located above
the mantle plume



NDSF Use in FY2006

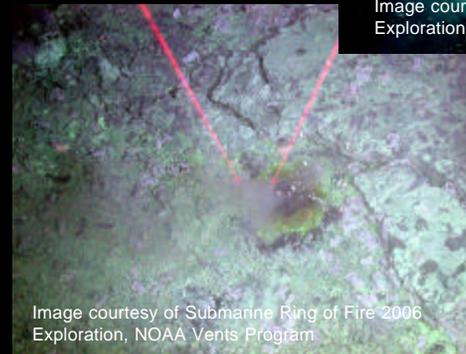
Project **Submarine Ring of Fire**

PI **Bob Embley**

Asset (& Ship) **Jason (Melville)**

Area **Western Pacific**

Objective **Conduct intensive explorations,
mapping and sampling at 6 to 8 sites**



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Other Deep Assets Used in FY2006

Project **Artificial Seep Experiment**

PI Bob Carney

Asset (& Ship) Johnson Sea-Link (Seward Johnson)

Area Gulf of Mexico

Objective Cold water seep larval dispersal



Image courtesy of NOAA/MBARI

Project **Davidson Seamount**

PI Andrew DeVogelaere

Asset (& Ship) Tiburon (Western Flyer)

Area Davidson Seamount

Objective Explore deep coral habitats around one of the largest seamounts in Western US



Image courtesy of NOAA/MBARI



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Other Deep Assets Used in FY2006

Project **Olympic Coast Deep Corals**

PI Ed Bowlby

Asset (& Ship) Ropos (McArthur II)

Area Olympic Coast NMS

Objective Exploration, mapping and investigation of deep sea corals, sponges and associated fauna



Project **Deep Water Shipwreck Hi-res Mapping**

PI Brendan Foley

Asset (& Ship) SeaBED, Thetis (Aegaeo)

Area Greek National Waters

Objective Locate, map, and assess ancient shipwrecks and active geologic and chemical features at three areas in Greece's deep-sea basins



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Other Deep Assets Used in FY2006

Project **Southern Mid-Atlantic Ridge Exploration**

PI Chris German

Asset (& Ship) ABE, Quest (Meteor)

Area Southern Mid-Atlantic Ridge

Objective Understand biogeography and biodiversity of chemosynthetic ecosystems at 4 vent-fields

Project **Unexplored regions of the Aegean, Black, and Eastern Mediterranean Seas**

PI Robert Ballard

Asset (& Ship) Argus, Hercules (Endeavor)

Area Aegean, Black, & Eastern Mediterranean Seas

Objective Search for well-preserved archaeological sites and investigate complex undersea terrains where discovery potential is high



Image courtesy of URI/IFE



Image courtesy of URI/IFE



Image courtesy of the Institute for Exploration, the University of Rhode Island (URI) Graduate School of Oceanography (GSO), and the URI Institute for Archaeological Oceanography

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Other Deep Assets Used in FY2006

KOK & NURP Submersibles

*Pisces IV and V - 60 Dive Days
in the Hawaiian Archipelago*



Autonomous Underwater Vehicle

Eagle Ray - Sea Trials

Max. Depth = 2,200 m

Capabilities:

- High Resolution Multibeam
- Conductivity/Temperature
- Expandable Science Payload



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Ocean Exploration and Research Budgets in FY2007

	2005	2006 ¹	2007
NURP	17.2	9.2 ^{-8.0}	?
OE	28.6	14.3 ^{-14.3}	?
<hr/>			
Combined	45.8	23.5 ^{-22.3}	?

1 – Red number indicates budget change from previous year in \$Millions



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NOAA Deep Submergence Facility Planned Use in FY2007

Project **Expedition to the Deep Slope**

PI Chuck Fisher

Asset (& Ship) Jason (Ron Brown)

Area Gulf of Mexico

Objective Systematic exploration of hydrocarbon seep communities
deeper than 1000m

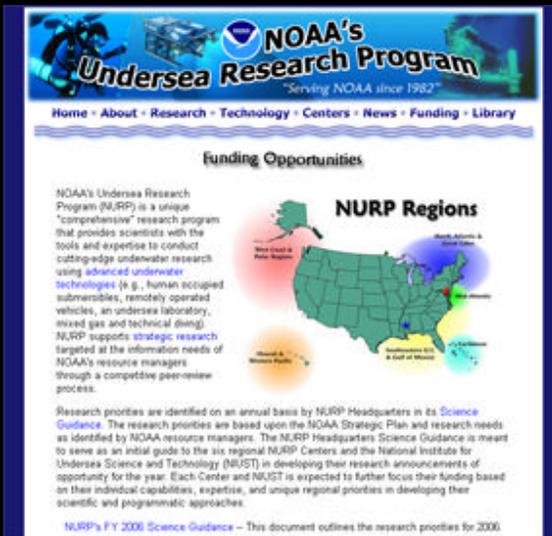


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Other opportunities

NURP Grant/ Proposal Process



The screenshot shows the NOAA's Undersea Research Program website. At the top, it features the NOAA logo and the text "NOAA's Undersea Research Program" with the tagline "Serving NOAA since 1982". Below this is a navigation menu with links for Home, About, Research, Technology, Centers, News, Funding, and Library. The main content area is titled "Funding Opportunities" and includes a map of the United States divided into six "NURP Regions": New England & Polar Regions, North Atlantic & Caribbean, Southeastern U.S. & Gulf of Mexico, Pacific Northwest, Alaska & Western Pacific, and Hawaii & Indian Ocean. Text on the page describes the program as a "comprehensive" research program that provides scientists with tools and expertise to conduct cutting-edge underwater research using advanced underwater technologies. It also mentions that research priorities are identified annually by NURP Headquarters in its Science Guidance document.

<http://www.nurp.noaa.gov>

For more info contact:
Kimberly.Pugliese@noaa.gov

OE Grant/ Proposal Process



The screenshot shows the NOAA's Office of Ocean Exploration website. At the top, it features the "EXPLORE" logo. Below this is the text "NOAA's Office of Ocean Exploration". The main content area includes a "Home" section with a "2007 Announcement of Opportunity (AO)" and a "REGISTER NOW ON GRANTS.GOV FOR FULL PROPOSAL SUBMISSION" link. There is also a "Regional Workshops" section and an "FAQs" section. At the bottom, there is a "Privacy Policy | Disclaimer | Contact Us" link and a footer with the text "Revised July 18, 2006 by the Office of Ocean Exploration Webmaster | Contact Us | National Oceanic and Atmospheric Administration | U.S. Department of Commerce | <http://explore.noaa.gov/veloma.html>".

<http://explore.noaa.gov/>

For more info contact:
Reginald.Beach@noaa.gov



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NOAA Ship Okeanos Explorer



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NOAA Ship Okeanos Explorer

T-AGOS Vessel Acquired from Navy in 2004

Undergoing Conversion at Todd Pacific Shipyard in Seattle

Phased Conversion Process:

Phase I: Major vessel infrastructure modifications and select mission systems (Oct 06-Jul 07)

Phase II: Most science/mission systems (Sep 07 – Apr 08)

Phase III: Additional science/mission systems, auxiliary vessel systems (TBD)

Planned operations Spring 2008



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NOAA Ship Okeanos Explorer

Capabilities:

- Mapping
- ROV
- Telepresence

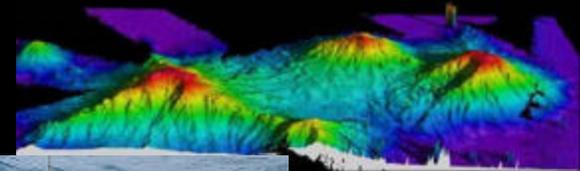


Image courtesy of URI/IFE



Kongsberg EM302

Image courtesy of URI/IFE

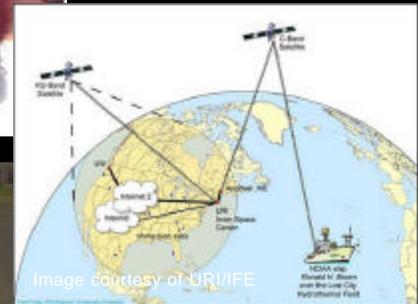


Image courtesy of URI/IFE



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NOAA Ship Okeanos Explorer



Dry Dock 1: October 6, 2006

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Thank you.

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for

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